

Sambrook J, Fritsch EF, Maniatis T (1989) Molecular cloning. A laboratory manual 2nd ed. Cold Spring Harbor Laboratory Press, Cold Spring Harbor, NY, Pages

- 5 Sandberg AA, Cartwright GB, Wintrobe MM (1956) Studies on leukemia. I. Uric acid excretion. *Blood* 11:154-166

- Savoca KV, Davis FF, Palczuk NC (1984) Induction of tolerance in mice by uricase and monomethoxypolyethylene glycol-modified uricase. *Int Arch Allergy Appl Immunol*
10 75:58-67

Sibony G, North ML, Bergerat JP, Lang JM, Oberling F (1984) Hyperuricemia resistant to urate oxidase. Role of anti-serum urate oxidase precipitating antibodies (letter). *Presse Med* 13:443

- 15 Singer JZ, Wallace SL (1986) The allopurinol hypersensitivity syndrome. Unnecessary morbidity and mortality. *Arthritis Rheum* 29:82-87

- Tsuji J, Hirose K, Kasahara E, Naitoh M, Yamamoto I (1985) Studies on the
20 antigenicity of the polyethylene glycol-modified uricase. *Int J Immunopharmacol* 7:725-730

- Venkateshan VS, Feingold R, Dikman S, Churg J (1990) Acute hyperuricemic nephropathy and renal failure after transplantation. *Nephron* 56:317-321

- 25 Veronese FM, Caliceti P, Schiavon O (1997) New synthetic polymers for enzyme and liposome modification. In: Harris JM, Zalipsky S (eds) *Poly(ethylene glycol) Chemistry and Biological Applications*, ACS, Washington, DC, pp182-192

- 30 West C, Carpenter BJ, Hakala TR (1987) The incidence of gout in renal transplant recipients. *Am J Kidney Dis* 10:369-371

Wu X, Lee CC, Muzny DM, Caskey CT (1989) Urate oxidase: Primary structure and evolutionary implications. *Proc Natl Acad Sci USA* 86:9412-9416

- 5 Wu X, Muzny DM, Lee CC, Caskey CT (1992) Two independent mutational events in the loss of urate oxidase. *J Mol Evol* 34:78-84

- Wu X, Wakamiya M, Vaishnav S, Geske R, Montgomery CM, Jr., Jones P, Bradley A et al (1994) Hyperuricemia and urate nephropathy in urate oxidase-deficient mice. *Proc*
10 *Natl Acad Sci USA* 91:742-746

Zittoun R, Dauchy F, Teillaud C, Barthelemy M, Bouchard P (1976) Le traitement des hyperuricemies en hematologie par l'urate-oxydase et l'allopurinol. *Ann Med Interne*
15 127:479-482

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- All documents cited above are incorporated herein, in their entirety, by
20 reference.

WE CLAIM:

1. A protein comprising a recombinant uricase protein of a mammalian species which has been modified to insert one or more lysine residues.
2. A protein according to claim 1 wherein said recombinant protein is a chimeric protein of two or more mammalian amino acid sequences.
3. A protein of claim 2 wherein said recombinant uricase chimeric protein comprises 304 amino acids, the first 225 N-terminal portion of said 304 amino acids being amino acids 1-225 of porcine uricase and the remaining 79 amino acids of said 304 amino acids being amino acids 226-304 of baboon uricase.
4. A protein of claim 2 wherein said recombinant uricase chimeric protein comprises 304 amino acids, the first 288 N-terminal portion of said 304 amino acids being amino acids 1-288 of porcine uricase and the remaining 16 amino acids of said 304 amino acids being amino acids 289-304 of baboon uricase.
5. A recombinant uricase protein selected from the group consisting of SEQ ID NO:s 2, 4, 8, 9, 10 and 11.
6. An isolated and purified nucleic acid molecule coding the recombinant uricase of claim 1.
7. An isolated and purified nucleic acid molecule coding the recombinant uricase of claim 3.
8. An isolated and purified nucleic acid molecule coding a recombinant uricase of claim 4.